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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/017,677 | 12/13/2001 | Kenneth L. Levy | P0502 | 9557 |

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| 23735 | 7590 | 08/14/2007 |
| DIGIMARC CORPORATION | | |
| 9405 SW GEMINI DRIVE | | |
| BEAVERTON, OR 97008 | | |

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| EXAMINER | |
| POLTORAK, PIOTR | |

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| ART UNIT | PAPER NUMBER |
| 2134 | |

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| MAIL DATE | DELIVERY MODE |
| 08/14/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/017,677 | Applicant(s) LEVY, KENNETH L. | |
| | Examiner Peter Poltorak | Art Unit 2134 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9-14 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9-14,21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>6/11/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment received on 6/11/07 has been carefully considered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. The amendment introduced new limitations to independent claims 1 and 10 and dependent claims 2-5 and 11-14. Claims 6-8 and 15-20 have been canceled and new claims 21-27 have been added. The newly introduced claims and limitations necessitated new grounds of rejection.

Response to Amendment

4. In light of applicant's amendments and arguments the previously cited 35 U.S.C. 112, first and second paragraph rejection that, as a result, has been withdrawn.
5. Applicant arguments are essentially directed towards the newly introduced limitations, which are addressed in this Office Action, below.
6. Claims 1-5, 9-14 and 21-27 have been examined.

Claim Objections

7. Claims 1-5, 9 and 21-27 are objected to because of the following informalities: it appears that the term "carriers" in claims 1 and 24 should be "carries". Appropriate correction is required.

Claim Rejections - 35 USC § 112

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8. Claims 1-5, 9 and 21-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
9. In particular, the examiner was not able to find support for selecting/generating “an orientation for a forensic digital watermark to be embedded in the content signal, wherein the orientation specifies a mapping of elements of the message to a pattern of samples in the media content signal ...” in the original specifications.
10. Claims 10-14 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

The term: “attempting” in claim 10 is not understood. It is not clear, whether the method requires detection of a digital watermark or not. For purpose of the further examination the phrase: “attempting to detect a digital watermark in the content signal” is treated as “detecting a digital watermark in the content signal”.

Also, the examiner was not able to ascertain the meaning of selecting/generating “an orientation for a forensic digital watermark to be embedded in the content signal, wherein the orientation specifies a mapping of elements of the message to a pattern of samples in the media content signal ...” especially in light of the current claim language and the original specification.

Claims 11-14 are rejected by virtue of their dependence.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

11. Claims 10-14 is rejected under 35 U.S.C. 103(a) as obvious over Conover (U.S. Patent No. 6373960).

Conover discloses receiving a media content signal, selecting an orientation for a forensic digital watermark signal to be embedded in the content signal and embedding the forensic digital watermark signal at the selected orientation in the content signal (Conover, col. 7 lines 37-47). Conover discloses that the orientation is selected so that the orientation varies for different receivers to reduce interference between overlapping forensic digital watermarks embedded in the content signal by different receivers (e.g. a subsequent broadcast transmitter, satellite, CATV service, or STB, Conover, col. 8 line 53 – col. 9 line 17).

Conover also discloses that different receivers have different forensic digital watermarks, wherein the forensic digital watermark robustly associate the content signal with and an identified receiver to track the content signal to the receiver (e.g. a unique set-top box serial number, Conover, col. 14 line 56- line 15 line 5).

12. Conover does not explicitly disclose attempting to detect a digital watermark in the content signal. However, Conover warns that embedding watermarks may affect the previously embedded watermarks and suggests transmitting and follows the warning with disclosure of the transmitting together with the watermarked content signal, data (site data list) that enables detection of embedded watermark in the content signal

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(particular watermarks that a particular site embeds, e.g. (col. 8 line 53- col. 9 line 29).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to utilize the data to detect embedded watermark in the content signal in order to include detecting a digital watermark in the content signal. One of ordinary skill in the art would have been motivated to perform such a modification given the benefit of ensuring that the embedding of the (second) forensic digital watermark signal would not affect the previously embedded watermarks.

13. Ensuring that the embedding of the forensic digital watermark does not affect previously embedded watermarks would read on "embedding a forensic digital watermark at an orientation that does not interfere with the digital watermark" and using the data regarding information about previously embedded watermarks reads on "the forensic digital watermark signal to be embedded in the content signal based on the digital watermark".

14. As per claim 11, the examiner points out that in computer programs must have define sets of parameters in order to be able to perform required operation and an orientation associated with a receiver is nothing else than a particular variable within define parameter.

15. As per random selection of the orientation from an allowed set, the limitation is an obvious variation that would not affect the outcome of the method disclosed by Conover. Furthermore, randomness is an important aspect of any information security and random selection of watermark orientation is old and well known in the

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art of digital watermarking (e.g. Venkatesan USPN 6898706). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to utilize random selection of watermark orientation given the benefit of better protection against potential attacks.

16. Claims 12-14 are directed towards the mechanism of implementing watermark, e.g. time segments/frequency bands/spatial locations orientation. As addressed in the previous Office Actions selecting any of these orientation methodology would have been an obvious variation that is well known in the art. One would have been motivated to use them especially in light of the benefits of these technologies as evidenced by their commercial success.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571) 272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



8/8/07



KAMBIZ ZAND
SUPERVISORY PATENT EXAMINER